2017 Master Catalog

WIDIA™

WIDIA

TopThread

High heat and high edge line load concentrated to a small nose radius, combined with high feed rates, places high demands on carbide threading inserts. The WIDIA TopThread system is the best solution for these problems.

The WIDIA TopThread system is the superior choice for high-demand applications like machining Acme, Buttress, and API threads.

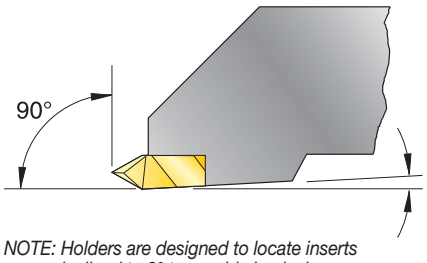
TopThread Insert Technology

TopThread insert technology brings superior chip control to your threading operations. Unlike competitors' designs, the WIDIA recessed chip groove, when used according to our recommendations, will control the chip in most applications, bringing you better tool life and lower cutting pressures.

- Reduced inconsistencies and better workpiece finish.
- Superior chip control reduces the danger to operators.
- Increased productivity in all of your threading operations.
- Excellent choice for special thread forms and toolholder designs.

TopThread™ inserts are available in TN6010™ and TN6025™ grades to withstand the demands placed on the cutting edge of the threading insert.

The versatility of the TopThread steel enables you to use both threading and grooving inserts in the same toolholder.



NOTE: Holders are designed to locate inserts inclined to 3° to provide back clearance down open side.

The Simple Solution

With the WIDIA™ TopThread solution, there is no need to worry about costly setup mistakes. TopThread insert selection is easy, quick, and enables accurate indexing to keep your machine spindle turning.

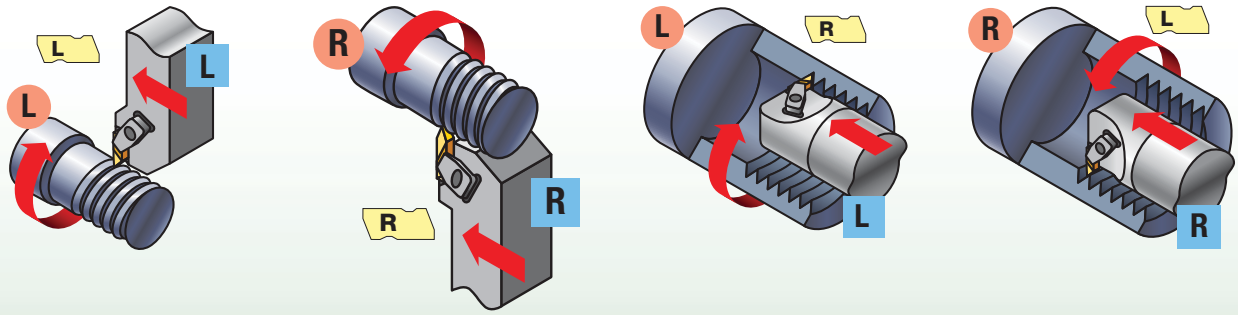
- Rigid design for increased insert stability during threading applications.
- Good quality threads, improved tool life, and improved surface finishes.
- Locking forces in three directions for superior resistance to tangential force.
- Unique 3° insert relief angle for back clearance.
- Available in partial profile inserts for 60° thread forms.

Step 1 • Select Threading Method and Hand of Tooling

Required Information:
- External/internal operation.
- Spindle rotation/hand of thread.
- Feed direction.

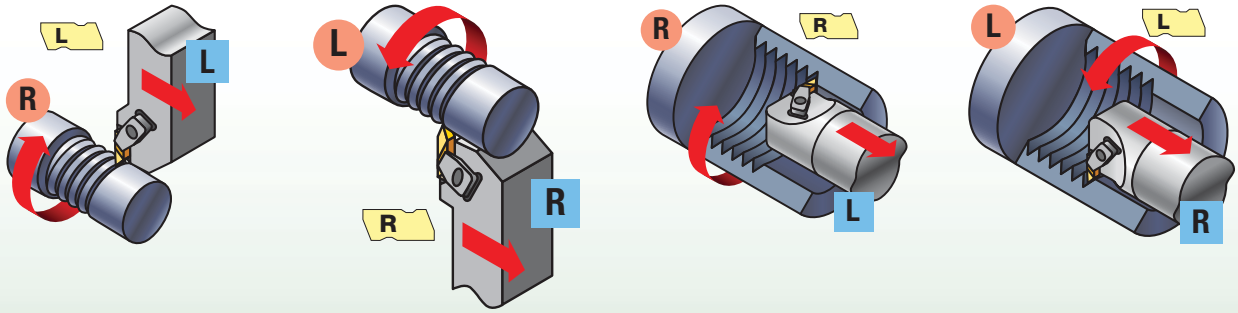
hand of thread | hand of toolholder | hand of insert

Feed direction toward the chuck • RECOMMENDED



external left-hand thread | external right-hand thread | internal left-hand thread | internal right-hand thread

Feed direction away from the chuck



external right-hand thread | external left-hand thread | internal right-hand thread | internal left-hand thread

Step 2 • Select Holder from Catalog Page

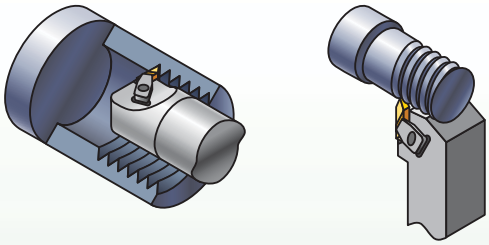
The insert size must match the gage insert size of your toolholder selection:

Required Information:
- External/internal operation.
- Minimum bore diameter (for internal operations).
- Hand of tool.
- Insert size (gage insert).

catalog number	gage insert
NSR-163D	N.3R
NSR-164D	N.4R

NOTE: TopThread toolholders and boring bars are listed with a gage insert to indicate the size and hand required. They are compatible with both grooving and threading inserts of the same size.

Select the appropriate holder for the insert size and hand:



NOTE: Optimize your threading operation by using the proper infeed method and the recommended infeed values.

See the Technical section on pages F83–F105 of this catalog.

For internal threading, minimum bore varies depending on thread type. See page F96 for details.

Step 3 • Choose Insert for Application

- See threading insert overview on page F8.
- Select cresting inserts for fully controlled thread form including diameter control. Cresting inserts eliminate the need for deburring.
- Non-cresting partial profile inserts can cut a variety of thread pitches.
- Note insert size for toolholder selection.

insert size	catalog number	TN6025	TN6010
2	NT-2RK	•	•
3	NT-3RK	•	•
4	NT-4RK	•	•

Step 4 • Select Grade and Speed

Recommendations for Grade and Speed Selection — m/min (SFM)

workpiece material	steel	stainless steel	cast iron	non-ferrous metals	high-temp alloys
insert style	chip control or neutral	chip control or positive	neutral	positive	positive
optimum cutting conditions	**TN6010** 50–230n (160–750)	**TN6010** 50–185 (160–600)	**TN6010** 70–210 (230–700)	—	**TN6010** 20–120 (65–400)
first choice	**TN6025** 40–200 (130–650)	**TN6025** 40–135 (130–450)	**TN6025** 60–145 (200–475)	**TN6025** 50–360 (160–1150)	**TN6025** 10–100 (35–330)

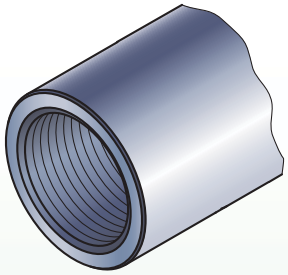
Examples:

Chip Control: *NT-K or NT-CK (partial profile only)*
Neutral: *NT, NT-C, NTF, NTC, NJ, NJF, NDC-V, NA, NDC, NTB-A/B*
Positive: *NTP, NTK, NJP, NJK*

TopThread Threading Example:

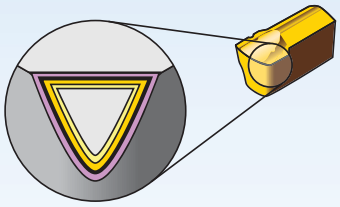
application: 8 TPI Acme internal right-hand thread
material: alloy steel
workpiece diameter: 4.5" (114,3mm) good cutting c onditions feed towards the chuck

Recommendation:
insert: NA3L8
grade: TN6010
insert size: 3
boring bar: A40NER3
gage insert: N.3L
speed: 500 SFM (150 m/min)
infeed passes*: 12 passes



** Infeed recommendations provided in technical data section on pages F90–F95.*

style						thread profile	standard	tolerance class	cresting	application	page(s)
chip control — K		neutral		positive							
NT-K		NT		NTP		Partial Profile 60°	–	–	N	General use for 60° thread forms, such as ISO and UN, where non-cresting inserts are desired to cut a variety of pitches.	**F13–F15**
NT-CK						Partial Profile 60° — coarse pitch	–	–	N	Coarse pitch 60° thread forms, such as ISO and UN, where non-cresting inserts are desired to cut a variety of pitches.	**F15**
		NTF		NTK		Partial Profile 60° — fine pitch	–	–	N	Fine pitch 60° thread forms, such as ISO and UN, where non-cresting inserts are desired to cut a variety of pitches — able to thread close to shoulders.	**F16**
		NTC				American UN	ANSI B1.1:74	2A/2B	Y	Widely used inch-based 60° V-form for all industries.	**F17**
				NJP		UNJ	SAEA588791	3A/3B	N	Controlled root radius on external threads for military and aerospace industries.	**F18**
				NJK		UNJ — fine pitch	SAEA588790	3A/3B	N	Controlled root radius on external threads for military and aerospace industries — able to thread close to shoulders.	**F18**
		NDC-V				NPT	ANSI/ACME B1.201: 1983	Standard NPT	Y	National Pipe Thread standard forms for pipe fittings.	**F18**
		NDC-V-M				NPT — multi-tooth	ANSI/ACME B1.201: 1983	Standard NPT	Y	High-productivity multi-tooth threading inserts for NPT threads.	**F19**
		NWC-E				Whitworth, BSW, BSP	BS 84:1956, ISO 228/1: 1982, DIN 259	Medium Class A	Y	Widely used 55° form for gas and water connections.	**F19**
		NDC-RD				API Round	API STD. 5B:1979	Standard API RD	Y	60° V-form with large radius for casing, tubing, and line pipe in the oil and gas industry, including 8 and 10 round forms.	**F20**
		NA				Acme	ANSI B1.5:1988	3G	N	29° truncated thread form for motion applications in a wide variety of industries.	**F21**
		NAS				Stub Acme	ANSI B1.8:1988	2G	N	Shallow depth 29° truncated thread form for motion applications in a wide variety of industries.	**F22**
		NTB-B				American Buttress — 45° clearance flank leading (Pull)	ANSI B1.9:1973	Class 2	N	Sawtooth form for axial load bearing applications in a variety of industries — use the "B" style when the 45° clearance flank is the leading flank.	**F22**

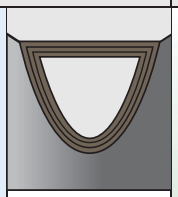
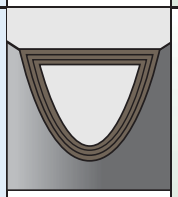
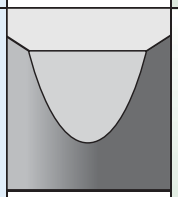


Coatings provide high-speed capability and are engineered for finishing to light roughing.

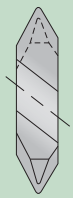
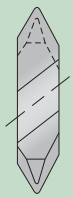
- Reduce cycle times — high speed capability.
- Longer tool life — new multilayer coating provides better wear resistance.

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

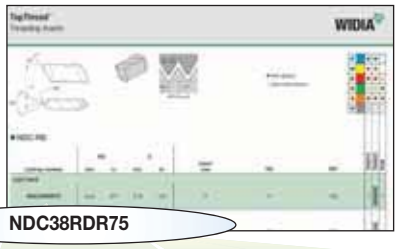
wear resistance ← → toughness

Grade	Coating	Grade Description		05	10	15	20	25	30	35	40	45
TN6010	 HC-P10	An advanced PVD TiAlN coating over a very deformation-resistant unalloyed carbide substrate. TN6010 is ideal for finishing to general machining of most workpiece materials at higher speeds. Excellent for machining most steels, stainless steels, cast irons, non-ferrous materials, and super alloys under stable conditions. It also performs well machining hardened and short chipping materials.	P									
			M									
			K									
			N									
			S									
			H									
TN6025	 HC-P25	An advanced PVD TiAlN-coated grade with a tough, ultra-fine-grain unalloyed substrate. For general-purpose machining of most steels, stainless steels, high-temp alloys, titanium, irons, and non-ferrous materials. Speeds may vary from low to medium and will handle interruptions and high feed rates.	P									
			M									
			K									
			N									
			S									
THM	 HW-K15	Uncoated carbide for light and medium machining. For cast iron, all non-ferrous metals, and non-metals. Also capable of machining hardened materials at low cutting speeds.										
			K									
			N									
			S									

- All TopThread inserts are precision-ground to provide accurate edge location and secure locking of the insert in the toolholder pocket.
- TopThread inserts can be used in either toolholders or boring bars.
- All non-cresting-type threading inserts can be used for either external or internal applications. All cresting-type inserts are designated specifically for external or internal use.
- Right-hand TopThread toolholders use right-hand inserts. Left-hand TopThread toolholders use left-hand inserts.
- Right-hand TopThread boring bars use left-hand inserts. Left-hand Top Thread boring bars use right-hand inserts.
- See this page for carbide grade selection and more technical information.

left-hand insert	right-hand insert
	

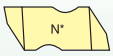
TopThread™ Insert Identification System



NDC38RDR75

N	D	C	3	8RD	R	75	
Type of Insert	Insert	Additional Information	Insert Size	Industry Thread Identification	Hand of Insert	Definition of Insert	Additional Information

N — TopThread™



D

A — Acme

D — API or NPT

J — UNJ thread

T — 60° V thread

W — 55° V Whitworth

C

B — Buttress

F — Fine pitch

S — Stub Acme

C — Cresting

P — Positive rake

K — Fine pitch, positive

3

8RD

Indicates API or drilling industry form designation (e.g., 10RD, 8RD, .038)
or
controlled root radius threading inserts indicate the root radius in .001" increments (NJ, NJF, NJP, NJK)
or
M indicates metric ISO thread

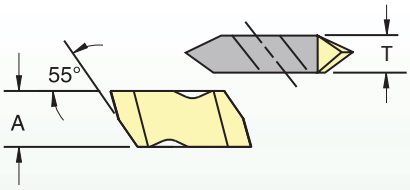
R

R — Right hand

L — Left hand

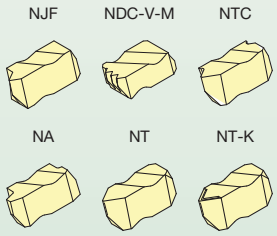
75

- Threads per inch or pitch (for metric)
- "A" or "B" type Buttress insert
- Taper per foot — API threads



TopThread insert dimensions

insert size	A inch	A mm	T inch	T mm
1	.100	2,54	.100	2,54
2	.219	5,56	.150	3,81
3	.344	8,74	.195	4,95
4	.453	11,51	.255	6,48
5	.688	17,48	.380	9,65
6	.453	11,51	.383	9,73
8	.312	7,93	.438	11,13



I — Internal thread

E — External thread (used only if internal and external thread forms are different)

M — Multiple tooth

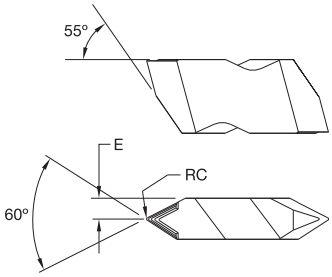
K — Standard chip control

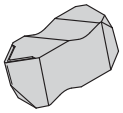
C — Coarse pitch

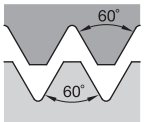
D — Dryseal

Material Group		Cutting Speed — vc m/min								
		TN6010			TN6025			THM		
		min	Start	max	min	Start	max	min	Start	max
P	0/1	140	**175**	210	130	**140**	150	90	**95**	100
	2	115	**145**	175	110	**145**	175	75	**100**	125
	3	115	**145**	175	110	**145**	175	75	**100**	125
	4	75	**100**	120	75	**95**	115	55	**65**	80
	5	105	**140**	170	100	**125**	145	70	**85**	100
	6	45	**60**	75	40	**55**	65	30	**40**	45
M	1	90	**115**	140	60	**75**	90	60	**75**	90
	2	55	**70**	90	40	**50**	55	50	**60**	75
	3	60	**80**	95	40	**50**	60	40	**50**	55
K	1	120	**150**	180	60	**80**	90	70	**90**	100
	2	120	**150**	180	60	**75**	85	50	**65**	80
	3	110	**140**	170	60	**75**	90	60	**70**	80
N	1	600	**750**	900	600	**750**	900	600	**750**	900
	2	535	**685**	835	535	**685**	835	500	**650**	800
	3	230	**300**	370	230	**300**	370	600	**750**	900
	4	135	**180**	225	135	**180**	225	500	**650**	800
	5	70	**90**	110	70	**90**	110	230	**300**	370
	6	445	**565**	690	445	**565**	690	150	**200**	250
	7	550	**700**	850	550	**700**	850	150	**200**	250
S	1	35	**40**	50	25	**35**	40	25	**35**	45
	2	20	**20**	30	15	**20**	20	20	**30**	35
	3	60	**70**	80	40	**60**	70	15	**25**	30
	4	30	**35**	45	20	**30**	35	10	**15**	20
H	1	15	**30**	60	–	**–**	–	–	**–**	–
	2	15	**30**	60	–	**–**	–	–	**–**	–
	3	15	**30**	60	–	**–**	–	–	**–**	–
	4	15	**30**	60	–	**–**	–	–	**–**	–

Material Group		Cutting Speed — vc SFM								
		TN6010			TN6025			THM		
		min	Start	max	min	Start	max	min	Start	max
P	0/1	455	**570**	685	425	**455**	490	295	**310**	325
	2	380	**475**	575	360	**465**	575	245	**320**	405
	3	380	**475**	575	360	**465**	575	245	**320**	405
	4	245	**320**	390	235	**300**	365	170	**210**	260
	5	345	**450**	555	325	**400**	475	230	**280**	330
	6	145	**195**	245	130	**180**	210	95	**130**	145
M	1	295	**390**	490	195	**245**	295	180	**220**	270
	2	180	**245**	310	130	**160**	180	115	**145**	165
	3	195	**260**	320	130	**165**	195	225	**295**	325
K	1	390	**490**	590	195	**255**	295	195	**255**	295
	2	390	**490**	590	195	**240**	280	195	**240**	280
	3	360	**455**	555	195	**245**	295	195	**245**	295
N	1	1965	**2460**	2950	1965	**2460**	2950	1805	**2295**	2785
	2	1750	**2240**	2730	1750	**2240**	2730	1805	**2295**	2785
	3	750	**980**	1210	750	**980**	1210	1805	**2295**	2785
	4	445	**590**	730	445	**590**	730	1195	**1555**	1915
	5	230	**295**	360	230	**295**	360	620	**820**	1015
	6	1450	**1855**	2260	1450	**1855**	2260	490	**655**	820
	7	1805	**2295**	2785	1805	**2295**	2785	425	**555**	690
S	1	110	**130**	165	75	**110**	130	75	**110**	130
	2	55	**65**	90	40	**55**	65	60	**85**	105
	3	195	**235**	260	135	**195**	235	45	**60**	75
	4	95	**115**	145	65	**95**	115	35	**50**	55
H	1	60	**100**	200	–	**–**	–	–	**–**	–
	2	60	**100**	200	–	**–**	–	–	**–**	–
	3	60	**100**	200	–	**–**	–	–	**–**	–
	4	60	**100**	200	–	**–**	–	–	**–**	–







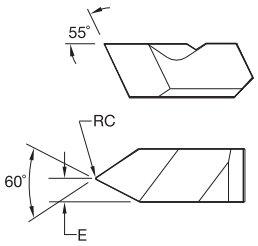
Partial Profile 60°

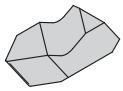
● first choice
○ alternate choice

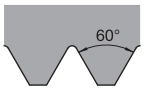
P	●	●	
M	●	●	
K	●	●	○
N	○	○	●
S	●	●	●
H	○		

NT-K

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NT2RK	0,10	.004	1,91	.075	2	0,70-3,0	1,25-3,5	8-36	7-20	3607651	3607837	-
NT3RK	0,17	.007	2,49	.098	3	1,25-4,0	2,0-5,0	6-20	5-12	3607643	3607824	-
NT4RK	0,17	.007	3,25	.128	4	1,25-6,25	2,0-6,25	4-20	4-12	-	3607846	-
left hand												
NT2LK	0,10	.004	1,91	.075	2	0,70-3,0	1,25-3,5	8-36	7-20	3607674	3607833	-
NT3LK	0,17	.007	2,49	.098	3	1,25-4,0	2,0-5,0	6-20	5-12	3607645	3607828	-



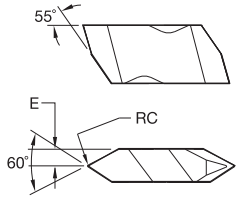


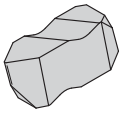


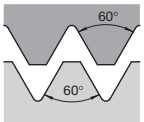
Partial Profile 60°
Internal

NT-1L

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
left hand												
NT1L	0,08	.003	1,09	.043	1	—	1,0-2,0	—	12-24	3636551	3636555	-







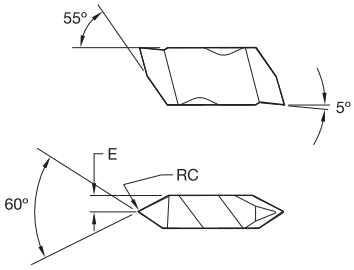
Partial Profile 60°

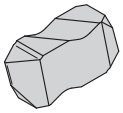
● first choice
○ alternate choice

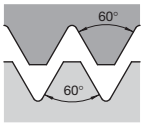
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

NT

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NT2R	0,10	.004	1,90	.075	2	0,70-3,0	1,25-3,5	8-36	7-20	3607647	3607843	-
NT3R	0,17	.007	2,49	.098	3	1,25-4,0	2,0-5,0	6-20	5-12	3607530	3607825	-
NT4R	0,17	.007	3,25	.128	4	1,25-6,25	2,0-6,25	4-20	4-12	3607676	3607834	-
left hand												
NT2L	0,10	.004	1,90	.075	2	0,70-3,0	1,25-3,5	8-36	7-20	3607675	3607835	-
NT3L	0,17	.007	2,49	.098	3	1,25-4,0	2,0-5,0	6-20	5-12	3607532	3607826	-
NT4L	0,17	.007	3,25	.128	4	1,25-6,25	2,0-6,25	4-20	4-12	-	3607849	-







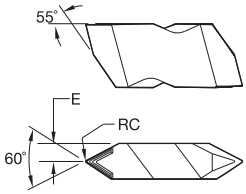
Partial Profile 60°

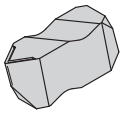
● first choice
○ alternate choice

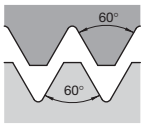
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

NTP

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NTP2R	0,10	.004	1,91	.075	2	0,70-3,0	1,25-3,5	8-36	7-20	3607677	3607841	-
NTP3R	0,17	.007	2,49	.098	3	1,25-4,0	2,0-5,0	6-20	5-12	3607644	3607823	-
NTP4R	0,17	.007	3,25	.128	4	1,25-6,25	2,0-6,25	4-20	4-12	-	3607839	-
left hand												
NTP2L	0,10	.004	1,91	.075	2	0,70-3,0	1,25-3,5	8-36	7-20	3607678	3607840	-
NTP3L	0,17	.007	2,49	.098	3	1,25-4,0	2,0-5,0	6-20	5-12	3607650	3607831	-





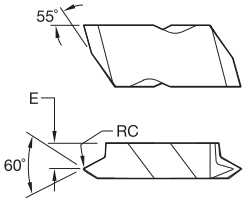


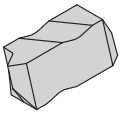
Partial Profile 60°

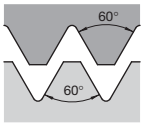
NT-CK

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NT3RCK	0,34	.014	2,46	.097	3	2,5-4,0	4,0	6-11	6	3607649	3607838	-

Threading







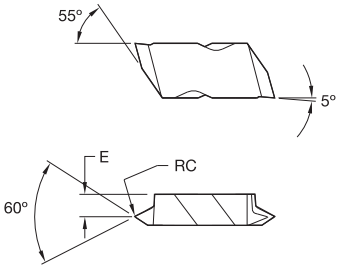
Partial Profile 60°

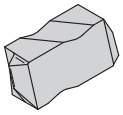
● first choice
○ alternate choice

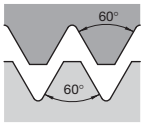
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

NTF

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NTF2R	0,08	.003	2,79	.110	2	0,60-1,75	1,0-2,0	14-44	12-24	3607673	3607852	-
NTF3R	0,08	.003	3,58	.141	3	0,60-2,5	1,0-2,5	10-44	9-24	3607531	3607830	-
left hand												
NTF3L	0,08	.003	3,58	.141	3	0,60-2,5	1,0-2,5	10-44	9-24	3607652	3607832	-



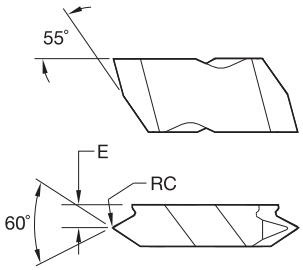


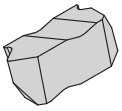


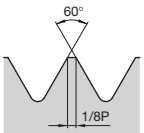
Partial Profile 60°

NTK

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NTK2R	0,08	.003	2,79	.110	2	0,60-1,75	1,0-2,0	14-44	12-24	3607646	3607836	-
NTK3R	0,08	.003	3,58	.141	3	0,60-2,50	1,0-2,5	10-44	9-24	3607528	3607827	-
left hand												
NTK3L	0,08	.003	3,58	.141	3	0,60-2,50	1,0-2,5	10-44	9-24	-	3607853	-







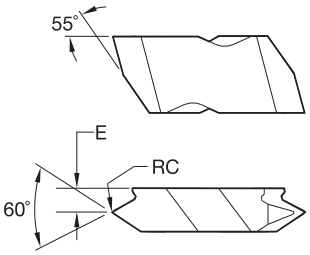
American
UN-External

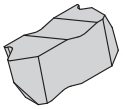
● first choice
○ alternate choice

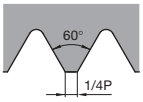
P	●	●	
M	●	●	
K	●	●	○
N	○	○	●
S	●	●	●
H	○		

NTC-E

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NTC3R16E	0,19	.008	3,76	.148	3	–	–	16	–	3636553	3636557	-
NTC3R14E	0,22	.009	3,76	.148	3	–	–	14	–	3636554	-	-
NTC3R12E	0,25	.010	3,76	.148	3	–	–	12	–	3636549	3636562	-



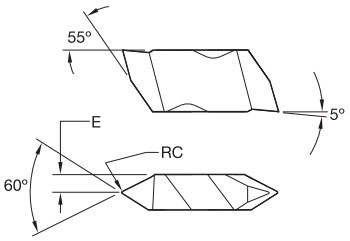


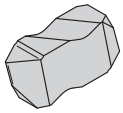


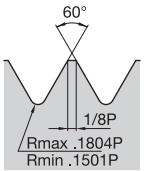
American
UN-Internal

NTC-I

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
left hand												
NTC3L12I	0,10	.004	3,76	.148	3	–	–	–	12	-	3636556	-







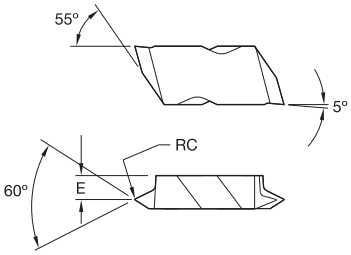
UNJ External

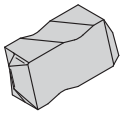
● first choice
○ alternate choice

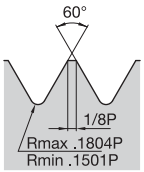
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

NJP

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NJP3014R12	0,33	.013	2,49	.098	3	–	–	12	–	'	3607850	'



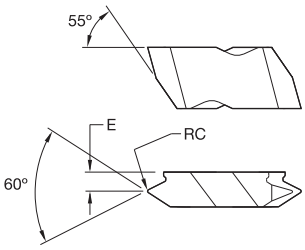


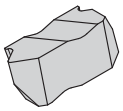


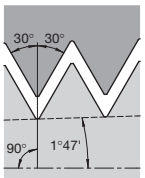
UNJ External

NJK

catalog number	RC mm	RC in	E mm	E in	insert size	external thread pitch mm	internal thread pitch mm	external TPI	internal TPI	TN6010	TN6025	THM
right hand												
NJK3008R20	0,20	.008	3,58	.141	3	–	–	20	–	3607648	'	'



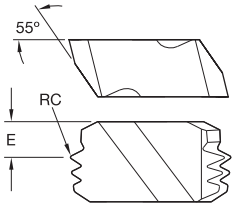


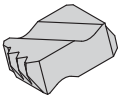


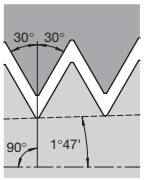
NPT

NDC-V

catalog number	RC mm	RC in	E mm	E in	insert size	TPI	TPF	TN6010	TN6025	THM
right hand										
NDC3115VR75	0,10	.004	3,66	.144	3	11.5	.750	3636550	'	'







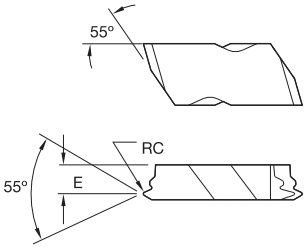
NPT

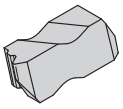
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

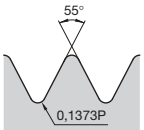
● first choice
○ alternate choice

NDC-V-M

catalog number	RC mm	RC in	E mm	E in	insert size	TPI	TPF	TN6010	TN6025	THM
right hand										
NDC8115VR75M	0,10	.004	2,59	.102	8	11.5	.750	3636552	-	-
NDC88VR75M	0,13	.005	2,41	.095	8	8	.750	3636548	-	-



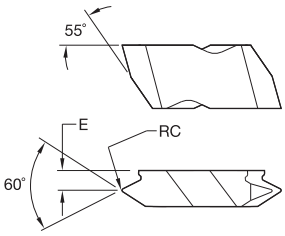


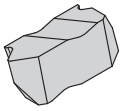


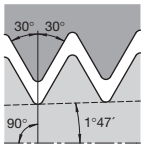
Whitworth BSW,
BSP-External

NWC-E

catalog number	RC mm	RC in	E mm	E in	insert size	TPI	TPF	TN6010	TN6025	THM
right hand										
NWC3R14E	0,24	.009	3,43	.135	3	14	—	-	3811638	-
NWC3R11E	0,30	.012	3,43	.135	3	11	—	-	3811639	-







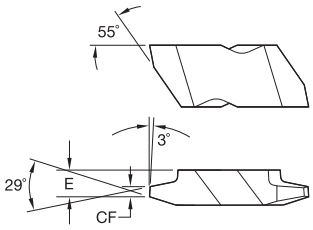
API Round

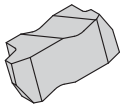
● first choice
○ alternate choice

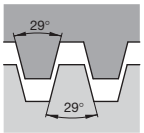
P	● ●	
M	● ●	
K	● ●	○
N	○ ○	●
S	● ●	●
H	○	

NDC-RD

catalog number	RC mm	RC in	E mm	E in	insert size	TPI	TPF	TN6010	TN6025	THM
right hand										
NDC38RDR75	0,43	.017	3,18	.125	3	8	.750	-	3636558	-
left hand										
NDC310RDL75	0,36	.014	3,18	.125	3	10	.750	-	3636565	-
NDC38RDL75	0,43	.017	3,18	.125	3	8	.750	-	3636559	-







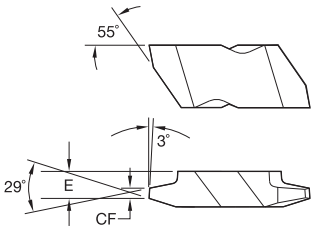
ACME

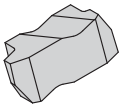
● first choice
○ alternate choice

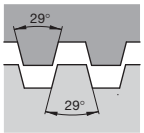
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

NA

catalog number	CF mm	CF in	E mm	E in	insert size	TPI	TN6010	TN6025	THM
right hand									
NA3R8	1,04	.041	3,79	.149	3	8	-	3607854	-
NA3R6	1,44	.057	3,79	.149	3	6	-	3607851	-
NA3R4	2,22	.088	3,38	.133	3	4	-	3607848	-
NA4R4	2,22	.088	5,13	.202	4	4	-	3636566	-
NA6R3	3,01	.118	7,19	.283	6	3	-	3636564	-
NA6R2	4,58	.180	7,19	.283	6	2	-	3636567	-
left hand									
NA3L8	1,04	.041	3,79	.149	3	8	-	3607855	-
NA3L6	1,44	.057	3,79	.149	3	6	-	3607847	-
NA3L4	2,22	.088	3,38	.133	3	4	-	3607842	-
NA4L4	2,22	.088	5,13	.202	4	4	-	3636560	-
NA6L3	3,01	.118	7,19	.283	6	3	-	3636561	-
NA6L2	4,58	.180	7,19	.283	6	2	-	3636568	-







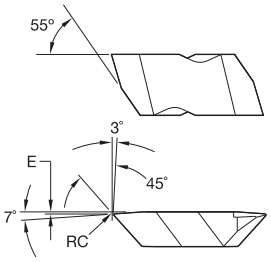
Stub ACME

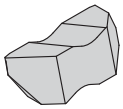
● first choice
○ alternate choice

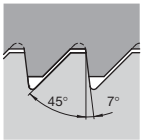
P		●	●	
M		●	●	
K		●	●	○
N		○	○	●
S		●	●	●
H		○		

NAS

catalog number	CF mm	CF in	E mm	E in	insert size	TPI	TN6010	TN6025	THM
right hand									
NAS3R8	1,21	.048	3,79	.149	3	8	–	3607856	–
left hand									
NAS3L12	0,83	.033	3,79	.149	3	12	–	3607844	–
NAS3L8	1,21	.048	3,79	.149	3	8	–	3607845	–
NAS3L6	1,66	.065	3,79	.149	3	6	–	3607829	–





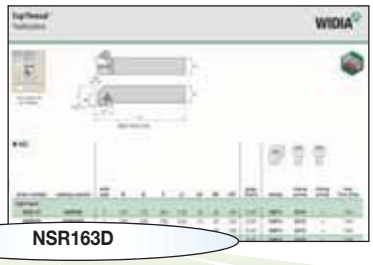


American
Buttress-Pull

NTB-B

catalog number	RC mm	RC in	E mm	E in	insert size	TPI	TPF	TN6010	TN6025	THM
left hand										
NTB3LB	0,17	.007	0,31	.012	3	8-16	—	–	3636563	–

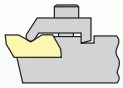
TopThread
Holder Identification System



NSR163D

N — Insert Holding Method

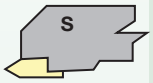
N — TopThread



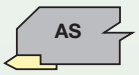
S — Insert Mounting Location

End mount

Side mount
Offset



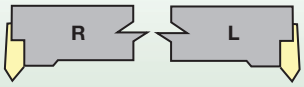
Side mount
No offset for
swiss machining



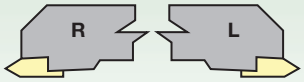
NRR undercut

R — Hand of Tool

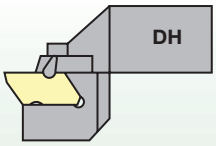
End mount



Side mount



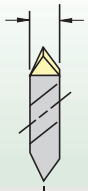
Drop Head



16 — Shank Size

Inch:
For shanks 5/8" square and larger, the number represents the number of sixteenths of width and height. For shanks under 5/8" square,the number of sixteenths of cross section is preceded by a zero. For rectangular holders, the first digit represents the number of eighths of width and the second digit the number of quarters of height, except for a toolholder 1-1/4" x 1-1/2", which is given the number 91.

3 — Insert Size



insert size	W1
2	.150"
3	.195"
4	.255"
5	.380"
6	.383"
8	.438"

D — Qualified Surface and Length

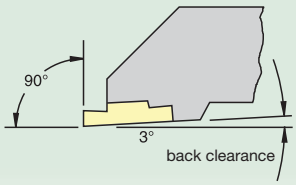
A — Qualified back and end, 4" long

B — Qualified back and end, 4.5" long

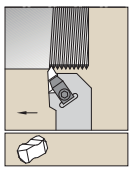
C — Qualified back and end, 5" long

D — Qualified back and end, 6" long

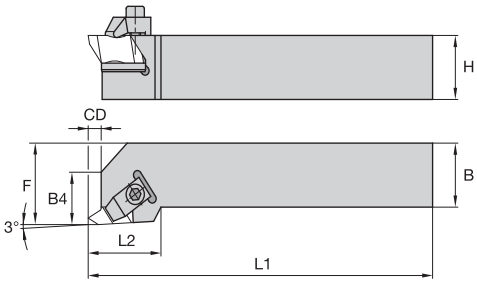
E — Qualified back and end, 7" long



NOTE: Holders are designed to locate insert inclined to 3° to provide back clearance down open side.



See page F8 for inserts.

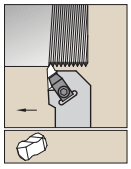


Right Hand Tool

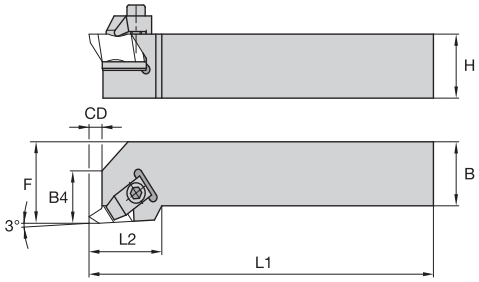
NS

order number	catalog number	seat size	H	B	F	L1	L2	B4	CD	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
right hand														
3632147	**NSR062**	2	.375	.375	.562	2.50	.75	.35	.138	N.2R	**CM74**	**S310**	**–**	7/64
3639035	**NSR082V**	2	.500	.500	.750	3.50	.75	.35	.138	N.2R	**CM74**	**S310**	**–**	7/64
3639044	**NSR102B**	2	.625	.625	.875	4.50	.75	.35	.138	N.2R	**CM74**	**S310**	**–**	7/64
3639026	**NSR122B**	2	.750	.750	1.000	4.50	.75	.35	.138	N.2R	**CM74**	**S310**	**–**	7/64
3639025	**NSR162C**	2	1.000	1.000	1.250	5.00	.75	.35	.138	N.2R	**CM74**	**S310**	**–**	7/64
3639027	**NSR123A**	3	.750	.750	1.000	4.00	1.25	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3639023	**NSR123B**	3	.750	.750	1.000	4.50	1.25	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3638592	**NSR163C**	3	1.000	1.000	1.250	5.00	1.25	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3638591	**NSR163D**	3	1.000	1.000	1.250	6.00	1.25	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3637496	**NSR853D**	3	1.250	1.000	1.250	6.00	1.25	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3639028	**NSR203D**	3	1.250	1.250	1.500	6.00	1.25	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3637506	**NSR243D**	3	1.500	1.500	2.000	6.00	1.38	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3637535	**NSR243E**	3	1.500	1.500	2.000	7.00	1.38	.50	.210	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3637509	**NSR205D**	5	1.250	1.250	1.500	6.00	2.00	.61	.415	N.5R	**CM80**	**S352**	**–**	1/4
3637540	**NSR245D**	5	1.500	1.500	2.000	6.00	2.00	.61	.415	N.5R	**CM80**	**S352**	**–**	1/4
left hand														
3632161	**NSL062**	2	.375	.375	.562	2.50	.75	.35	.138	N.2L	**CM75**	**S310**	**–**	7/64
3637485	**NSL082V**	2	.500	.500	.750	3.50	.75	.35	.138	N.2L	**CM75**	**S310**	**–**	7/64
3637510	**NSL102B**	2	.625	.625	.875	4.50	.75	.35	.138	N.2L	**CM75**	**S310**	**–**	7/64
3632145	**NSL122B**	2	.750	.750	1.000	4.50	.75	.35	.138	N.2L	**CM75**	**S310**	**–**	7/64
3632138	**NSL162C**	2	1.000	1.000	1.250	5.00	.75	.35	.138	N.2L	**CM75**	**S310**	**–**	7/64
3632152	**NSL123A**	3	.750	.750	1.000	4.00	1.25	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3639032	**NSL123B**	3	.750	.750	1.000	4.50	1.25	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3639029	**NSL163C**	3	1.000	1.000	1.250	5.00	1.25	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3639024	**NSL163D**	3	1.000	1.000	1.250	6.00	1.25	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3637508	**NSL853D**	3	1.250	1.000	1.250	6.00	1.25	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3639037	**NSL203D**	3	1.250	1.250	1.500	6.00	1.25	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3637515	**NSL243D**	3	1.500	1.500	2.000	6.00	1.38	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3637548	**NSL243E**	3	1.500	1.500	2.000	7.00	1.38	.50	.210	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3637536	**NSL205D**	5	1.250	1.250	1.500	6.00	2.00	.61	.415	N.5L	**CM81**	**S352**	**–**	1/4

NOTE: F dimension measured over sharp point of insert.



See page F8 for inserts.

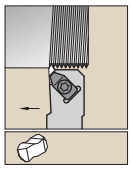


Right Hand Tool

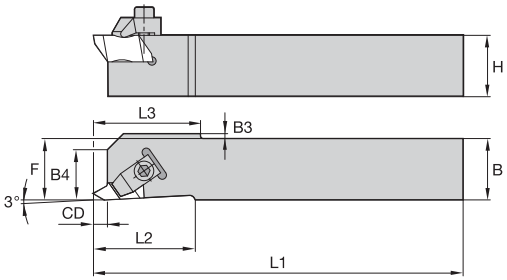
NS (With Shim)

order number	catalog number	seat size	H	B	F	L1	L2	B4	CD	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
right hand														
3639031	**NSR164C**	2	1.000	1.000	1.250	5.00	1.38	.54	.294	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3639033	**NSR164D**	2	1.000	1.000	1.250	6.00	1.38	.54	.294	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3637526	**NSR854D**	4	1.250	1.000	1.250	6.00	1.38	.54	.294	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3637529	**NSR204C**	4	1.250	1.250	1.500	5.00	1.38	.54	.294	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3637534	**NSR864E**	2	1.500	1.000	1.250	7.00	1.38	.54	.294	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3637501	**NSR244E**	4	1.500	1.500	2.000	7.00	1.50	.54	.294	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3632153	**NSR166D**	3	1.000	1.000	1.250	6.00	1.38	.67	.334	N.6R	**CM120**	**S412**	**–**	5/32
3637472	**NSR206D**	3	1.250	1.250	1.500	6.00	1.38	.67	.334	N.6R	**CM120**	**S412**	**–**	5/32
3637520	**NSR246D**	4	1.500	1.500	2.000	6.00	1.50	.67	.334	N.6R	**CM120**	**S412**	**–**	5/32
3637539	**NSR168D**	4	1.000	1.000	1.250	6.00	1.25	.72	.225	N.8R	**CM144**	**S422**	**–**	3/16
left hand														
3632151	**NSL164C**	2	1.000	1.000	1.250	5.00	1.38	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3639040	**NSL164D**	6	1.000	1.000	1.250	6.00	1.38	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3637541	**NSL854D**	3	1.250	1.000	1.250	6.00	1.38	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3641699	**NSL204C**	2	1.250	1.250	1.500	5.00	1.38	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3639036	**NSL204D**	1	1.250	1.250	1.500	6.00	1.38	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3641700	**NSL864E**	1	1.500	1.000	1.250	7.00	1.38	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3637505	**NSL244D**	2	1.500	1.500	2.000	6.00	1.50	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3637533	**NSL244E**	4	1.500	1.500	2.000	7.00	1.50	.54	.294	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3637507	**NSL206D**	2	1.250	1.250	1.500	6.00	1.38	.67	.334	N.6L	**CM121**	**S412**	**–**	5/32
3637546	**NSL246D**	2	1.500	1.500	2.000	6.00	1.50	.67	.334	N.6L	**CM121**	**S412**	**–**	5/32

NOTE: F dimension measured over sharp point of insert.



See page F8 for inserts.

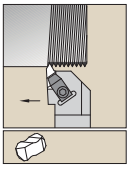


Right Hand Tool

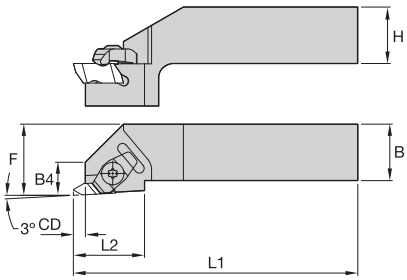
NAS

order number	catalog number	seat size	H	B	F	L1	L2	B4	CD	B3	L3	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
right hand																
3632140	**NASR062D**	2	.375	.375	.375	6.00	.75	.35	.138	.070	.88	N.2R	**CM182**	**S310**	**—**	7/64
3636529	**NASR082D**	2	.500	.500	.500	6.00	.75	.35	.138	—	—	N.2R	**CM182**	**S310**	**—**	7/64
3639039	**NASR102B**	2	.625	.625	.625	4.50	.75	.35	.138	—	—	N.2R	**CM74**	**S310**	**—**	7/64
3639042	**NASR083D**	3	.500	.500	.500	6.00	1.25	.50	.210	.125	1.32	N.3R	**CM184LP**	**—**	**S2112**	25 IP
3636532	**NASR103B**	3	.625	.625	.625	4.50	1.25	—	.210	—	—	N.3R	**CM184LP**	**—**	**S2112**	25 IP
left hand																
3637531	**NASL062D**	2	.375	.375	.375	6.00	.75	.35	.138	.070	.88	N.2L	**CM183**	**S310**	**—**	7/64
3636534	**NASL082D**	2	.500	.500	.500	6.00	.75	.35	.138	—	—	N.2L	**CM183**	**S310**	**—**	7/64
3637489	**NASL102B**	2	.625	.625	.625	4.50	.75	.35	.138	—	—	N.2L	**CM75**	**S310**	**—**	7/64
3637497	**NASL083D**	3	.500	.500	.500	6.00	1.25	.50	.210	.125	1.32	N.3L	**CM185**	**S412**	**—**	25 IP
3636524	**NASL103B**	3	.625	.625	.625	4.50	1.25	—	.210	—	—	N.3L	**CM185LP**	**—**	**S2112**	25 IP

NOTE: F dimension measured over sharp point of insert.



See page F8 for inserts.

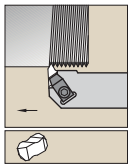


Right Hand Tool

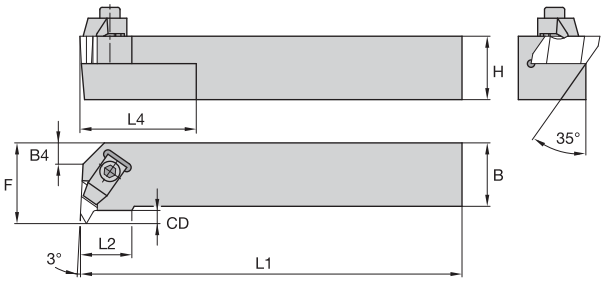
NS-DH

order number	catalog number	seat size	H	B	F	L1	L2	B4	CD	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
right hand														
3637547	**NSRDH122B**	2	.750	.750	1.000	4.50	.75	.40	.138	N.2R	**CM74**	**S310**	**—**	7/64
3637528	**NSRDH163D**	3	1.000	1.000	1.250	6.00	1.25	.58	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3637511	**NSRDH203D**	3	1.250	1.250	1.500	6.00	1.25	.62	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3637530	**NSRDH204D**	4	1.250	1.250	1.500	6.00	1.38	.62	.294	N.4R	**CM72LP**	**—**	**S2112**	25 IP
left hand														
3637518	**NSLDH203D**	3	1.250	1.250	1.500	6.00	1.25	.62	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP

NOTE: F dimension measured over sharp point of insert.

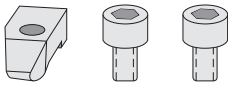


See page F8 for inserts.



Right Hand Tool

NE



order number	catalog number	seat size	H	B	F	L1	L2	L4	B4	CD	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
right hand															
3637521	**NER062**	2	.375	.375	.750	2.50	.50	.50	—	.138	N.2L	**CM75**	**S310**	**—**	7/64
3637494	**NER082V**	2	.500	.500	.750	3.50	.50	1.00	—	.138	N.2L	**CM75**	**S310**	**—**	7/64
3637517	**NER102B**	2	.625	.625	.750	4.50	—	1.00	—	.138	N.2L	**CM75**	**S310**	**—**	7/64
3632156	**NER122B**	2	.750	.750	1.000	4.50	.50	1.00	.29	.138	N.2L	**CM75**	**S310**	**—**	7/64
3637486	**NER162C**	2	1.000	1.000	1.250	5.00	.50	1.00	.41	.138	N.2L	**CM75**	**S310**	**—**	7/64
3632133	**NER123B**	3	.750	.750	1.125	4.50	.75	2.00	—	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP
3639038	**NER163C**	3	1.000	1.000	1.250	5.00	.75	2.00	—	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP
3639030	**NER163D**	3	1.000	1.000	1.250	6.00	.75	2.00	—	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP
3637523	**NER853D**	3	1.250	1.000	1.250	6.00	.75	2.00	—	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP
3632150	**NER203D**	3	1.250	1.250	1.500	6.00	.75	2.00	.26	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP
3637524	**NER243D**	3	1.500	1.500	2.000	6.00	.75	2.00	.76	.210	N.3L	**CM73LP**	**—**	**S2112**	25 IP
3637492	**NER164C**	4	1.000	1.000	1.375	5.00	.75	2.00	—	.294	N.4L	**CM73LP**	**—**	**S2112**	25 IP
3639043	**NER164D**	4	1.000	1.000	1.375	6.00	.75	2.00	—	.294	N.4L	**CM73LP**	**—**	**S2112**	25 IP
3632157	**NER204D**	4	1.250	1.250	1.625	6.00	.75	2.00	.27	.294	N.4L	**CM73LP**	**—**	**S2112**	25 IP
3637522	**NER244D**	4	1.500	1.500	2.000	6.00	.75	2.00	.65	.294	N.4L	**CM73LP**	**—**	**S2112**	25 IP
3637542	**NER205D**	5	1.250	1.250	2.000	6.00	1.44	2.00	—	.415	N.5L	**CM81**	**S352**	**—**	1/4
3637544	**NER206D**	6	1.250	1.250	1.625	6.00	.75	2.00	.27	.300	N.6L	**CM121**	**S412**	**—**	5/32

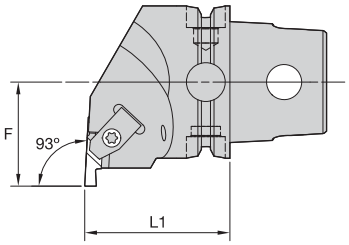
NOTE: F dimension measured over sharp point of insert.

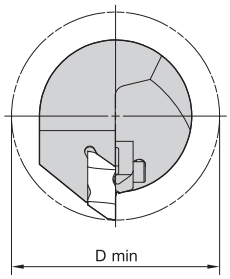
(continued)

(NE — continued)

order number	catalog number	seat size	H	B	F	L1	L2	L4	B4	CD	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
left hand															
3637525	**NEL062**	2	.375	.375	.750	2.50	.50	.50	—	.138	N.2R	**CM74**	**S310**	**—**	7/64
3632158	**NEL082V**	2	.500	.500	.750	3.50	.50	1.00	—	.138	N.2R	**CM74**	**S310**	**—**	7/64
3637532	**NEL102B**	2	.625	.625	.750	4.50	—	1.00	—	.138	N.2R	**CM74**	**S310**	**—**	7/64
3637503	**NEL122B**	2	.750	.750	1.000	4.50	.50	1.00	.29	.138	N.2R	**CM74**	**S310**	**—**	7/64
3637500	**NEL162C**	2	1.000	1.000	1.250	5.00	.50	1.00	.41	.138	N.2R	**CM74**	**S310**	**—**	7/64
3632144	**NEL123B**	3	.750	.750	1.125	4.50	.75	2.00	—	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3632155	**NEL163C**	3	1.000	1.000	1.250	5.00	.75	2.00	—	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3639041	**NEL163D**	3	1.000	1.000	1.250	6.00	.75	2.00	—	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3637538	**NEL853D**	3	1.250	1.000	1.250	6.00	.75	2.00	—	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3632154	**NEL203D**	3	1.250	1.250	1.500	6.00	.75	2.00	.26	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3637537	**NEL243D**	3	1.500	1.500	2.000	6.00	.75	2.00	.76	.210	N.3R	**CM72LP**	**—**	**S2112**	25 IP
3637493	**NEL164C**	4	1.000	1.000	1.375	5.00	.75	2.00	—	.294	N.4R	**CM72LP**	**—**	**S2112**	25 IP
3632162	**NEL164D**	4	1.000	1.000	1.375	6.00	.75	2.00	—	.294	N.4R	**CM72LP**	**—**	**S2112**	25 IP
3632159	**NEL204D**	4	1.250	1.250	1.625	6.00	.75	2.00	.27	.294	N.4R	**CM72LP**	**—**	**S2112**	25 IP
3637543	**NEL244D**	4	1.500	1.500	2.000	6.00	.75	2.00	.65	.294	N.4R	**CM72LP**	**—**	**S2112**	25 IP
3637549	**NEL205D**	5	1.250	1.250	2.000	6.00	1.44	2.00	—	.415	N.5R	**CM80**	**S352**	**—**	1/4
3641697	**NEL206D**	6	1.250	1.250	1.625	6.00	.75	2.00	.27	.300	N.6R	**CM120**	**S412**	**—**	5/32

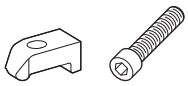
NOTE: F dimension measured over sharp point of insert.



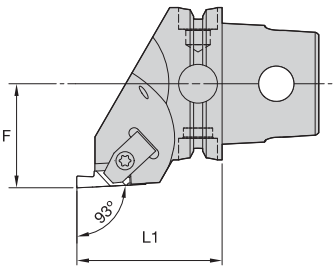


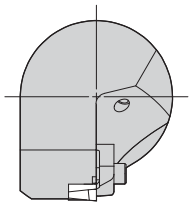
KM QUICK CHANGE

NE 93°



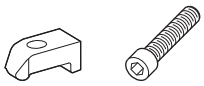
order number	catalog number	L1 mm	L1 in	F mm	F in	D min mm	D min in	gage insert	clamp	clamp screw	kg	lbs
right hand												
3902285	**KM40TSNER2**	40	1.575	27	1.063	54	2.126	NG2L	**CM75**	**MS1488**	0,30	.66
3902286	**KM40TSNER3**	40	1.575	27	1.063	54	2.126	NG3L	**CM73**	**MS1489**	0,30	.67
3902287	**KM40TSNER4**	40	1.575	27	1.063	54	2.126	NG4L	**CM73**	**MS1489**	0,30	.65
left hand												
3902132	**KM40TSNEL2**	40	1.575	27	1.063	54	2.126	NG2R	**CM74**	**MS1488**	0,30	.66
3902283	**KM40TSNEL3**	40	1.575	27	1.063	54	2.126	NG3R	**CM-72**	**MS1489**	0,30	.67
3902284	**KM40TSNEL4**	40	1.575	27	1.063	54	2.126	NG4R	**CM-72**	**MS1489**	0,30	.65



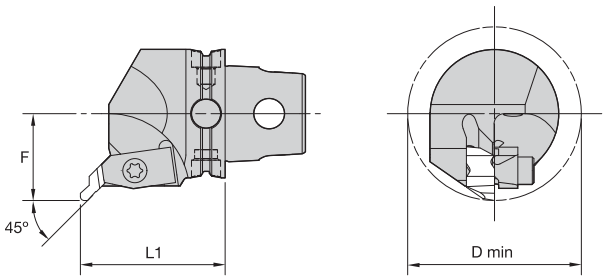


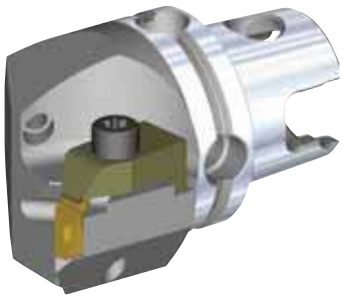
KM QUICK CHANGE

NS 93°



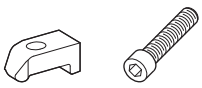
order number	catalog number	L1 mm	L1 in	F mm	F in	gage insert	clamp	clamp screw	kg	lbs
right hand										
3902293	**KM40TSNSR2**	40	1.575	27	1.063	NG2R	**CM74**	**MS1488**	0,32	.70
3902294	**KM40TSNSR3**	47	1.850	27	1.063	NG3R	**CM-72**	**MS1489**	0,32	.71
3902295	**KM40TSNSR4**	47	1.850	27	1.063	NG4R	**CM-72**	**MS1489**	0,30	.66
left hand										
3902290	**KM40TSNSL2**	40	1.575	27	1.063	NG2L	**CM75**	**MS1488**	0,32	.70
3902291	**KM40TSNSL3**	47	1.850	27	1.063	NG3L	**CM73**	**MS1489**	0,33	.72
3902292	**KM40TSNSL4**	47	1.850	27	1.063	NG4L	**CM73**	**MS1489**	0,30	.66





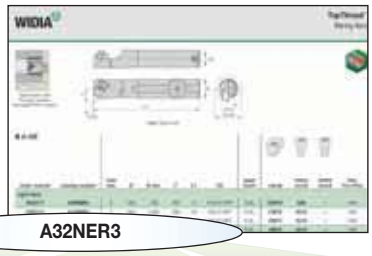
KM QUICK CHANGE

NR 45°



order number	catalog number	L1 mm	L1 in	F mm	F in	D min mm	D min in	gage insert	clamp	clamp screw	kg	lbs
right hand												
3902289	**KM40TSNRR3045M**	45	1.772	27	1.063	54	2.126	NU3L	**CM73**	**MS1489**	0,34	.75
left hand												
3902288	**KM40TSNRL3045M**	45	1.772	27	1.063	54	2.126	NU3R	**CM-72**	**MS1489**	0,33	.74

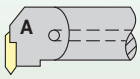
TopThread
Boring Bar Identification System



A32NER3

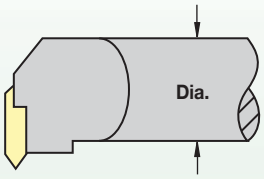
A
Bar Type

Steel with coolant



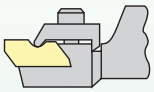
32
Bar Diameter

A two-digit number that indicates the bar diameter in 1/16" increments.



N
Insert Holding Method

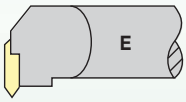
N — TopThread*



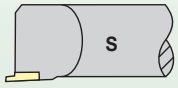
*Proprietary standard only.

E
Insert Location

End mount

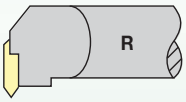


Side mount

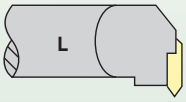


R
Hand of Tool

Right hand

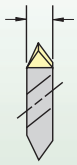


Left hand

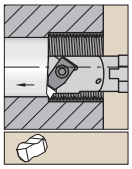


3
Insert Size

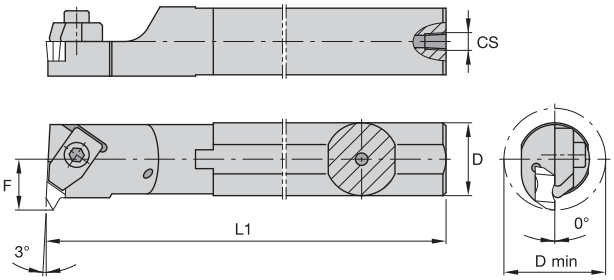
W1



insert size	W1
1	.100"
2	.150"
3	.195"
4	.255"
5	.380"
6	.383"
8	.438"



Steel shank with through coolant. See page F8 for inserts.

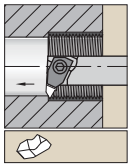


Right Hand Tool

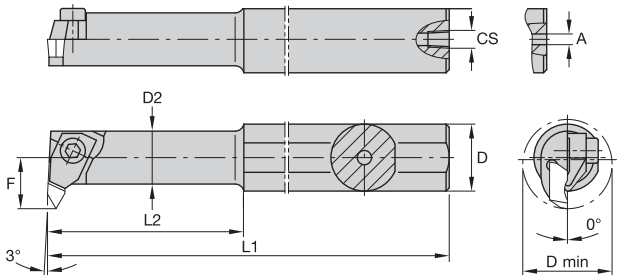
A-NE

order number	catalog number	seat size	D	D min	F	L1	CS	gage insert	clamp	clamp screw	clamp screw	hex/ Torx Plus
right hand												
3632117	**A08NER2**	2	.500	.730	.437	8	1/16-27 NPT	N.2L	**CM147**	**S39**	**–**	7/64
3632114	**A10NER2**	2	.625	1.000	.500	10	1/8-27 NPT	N.2L	**CM75**	**S310**	**–**	7/64
3632118	**A12NER2**	2	.750	1.125	.562	10	1/8-27 NPT	N.2L	**CM75**	**S310**	**–**	7/64
3632130	**A16TNER2**	2	1.000	1.375	.688	12	1/4-18 NPT	N.2L	**CM75**	**S310**	**–**	7/64
3632113	**A16NER3**	3	1.000	1.375	.688	12	1/4-18 NPT	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3632116	**A20NER3**	3	1.250	1.750	.875	14	1/4-18 NPT	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3632115	**A24NER3**	3	1.500	2.000	1.000	14	1/4-18 NPT	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3632132	**A28NER3**	3	1.750	2.250	1.125	14	1/4-18 NPT	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3632122	**A32NER3**	3	2.000	2.500	1.250	16	1/4-18 NPT	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3632146	**A40NER3**	3	2.500	3.000	1.500	16	1/4-18 NPT	N.3L	**CM73LP**	**–**	**S2112**	25 IP
3632123	**A28NER4**	4	1.750	2.500	1.250	14	1/4-18 NPT	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3632125	**A32NER4**	4	2.000	2.750	1.375	16	1/4-18 NPT	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3632136	**A40NER4**	4	2.500	3.250	1.625	16	1/4-18 NPT	N.4L	**CM73LP**	**–**	**S2112**	25 IP
3637514	**A32NER5**	5	2.000	2.812	1.406	16	1/4-18 NPT	N.5L	**CM81**	**S352**	**–**	1/4
3632143	**A32NER6**	6	2.000	2.750	1.375	16	1/4-18 NPT	N.6L	**CM121**	**S412**	**–**	5/32
3637498	**A40NER6**	6	2.500	3.250	1.625	16	1/4-18 NPT	N.6L	**CM121**	**S412**	**–**	5/32
left hand												
3632131	**A08NEL2**	2	.500	.730	.437	8	1/16-27 NPT	N.2R	**CM146**	**S39**	**–**	7/64
3632127	**A10NEL2**	2	.625	1.000	.500	10	1/8-27 NPT	N.2R	**CM74**	**S310**	**–**	7/64
3632126	**A12NEL2**	2	.750	1.125	.562	10	1/8-27 NPT	N.2R	**CM74**	**S310**	**–**	7/64
3632142	**A16NEL2**	2	1.000	1.375	.688	12	1/4-18 NPT	N.2R	**CM74**	**S310**	**–**	7/64
3632120	**A16NEL3**	3	1.000	1.375	.688	12	1/4-18 NPT	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3632124	**A20NEL3**	3	1.250	1.750	.875	14	1/4-18 NPT	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3632128	**A24NEL3**	3	1.500	2.000	1.000	14	1/4-18 NPT	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3637490	**A28NEL3**	3	1.750	2.250	1.125	14	1/4-18 NPT	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3632139	**A32NEL3**	3	2.000	2.500	1.250	16	1/4-18 NPT	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3637504	**A40NEL3**	3	2.500	3.000	1.500	16	1/4-18 NPT	N.3R	**CM72LP**	**–**	**S2112**	25 IP
3632141	**A28NEL4**	4	1.750	2.500	1.250	14	1/4-18 NPT	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3632149	**A32NEL4**	4	2.000	2.750	1.375	16	1/4-18 NPT	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3637491	**A40NEL4**	4	2.500	3.250	1.625	16	1/4-18 NPT	N.4R	**CM72LP**	**–**	**S2112**	25 IP
3637527	**A32NEL5**	5	2.000	2.812	1.406	16	1/4-18 NPT	N.5R	**CM80**	**S352**	**–**	1/4
3637512	**A32NEL6**	6	2.000	2.750	1.375	16	1/4-18 NPT	N.6R	**CM120**	**S412**	**–**	5/32

NOTE: F dimension measured over sharp point of insert.

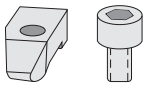


Necked steel shank with through coolant. See page F8 for inserts.



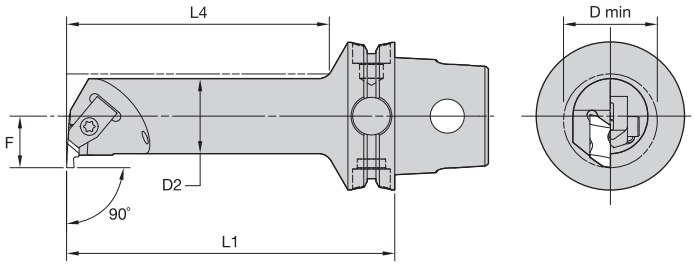
Right Hand Tool

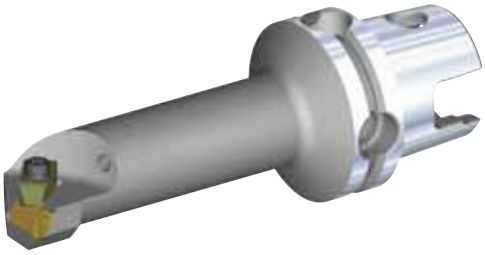
A-NE-1



order number	catalog number	seat size	D	D min	D2	L1	L2	F	A	CS	gage insert	clamp	clamp screw	hex/ Torx Plus
right hand														
3632121	**A06NER1**	1	.375	.440	.312	6	1	.258	.125	—	N.1L	**CM109**	**S304**	5/64
3632119	**A08NER1**	1	.500	.440	.310	8	1	.258	.094	1/16-27 NPT	N.1L	**CM109**	**S304**	5/64
3632148	**A10NER1**	1	.625	.800	—	10	—	.406	—	1/8-27 NPT	N.1L	**CM109**	**S304**	5/64

NOTE: F dimension measured over sharp point of insert.





KM QUICK CHANGE

NE 90° • Steel

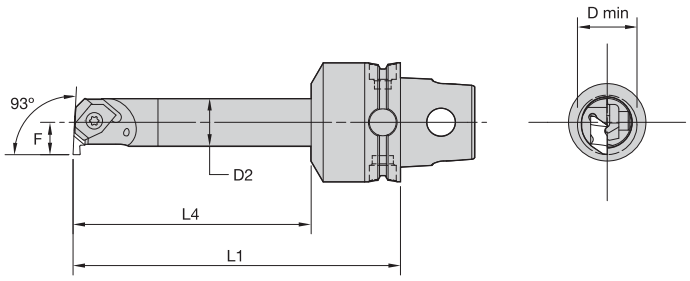
order number	catalog number	D2 mm	D2 in	D min mm	D min in	F mm	F in	L4 mm	L4 in	L1 mm	L1 in	gage insert	kg	lbs
right hand														
3955481	**KM40TSS12ENER2**	12	.472	19	.73	11	.433	42	1.655	70	2.756	NG2L	0,27	.58
3955483	**KM40TSS16FNER2**	16	.630	20	.79	11	.433	56	2.209	80	3.150	NG2L	0,28	.62
3955485	**KM40TSS20GNER2**	20	.787	25	.98	13	.512	70	2.757	90	3.543	NG2L	0,35	.76
3955487	**KM40TSS25ENER2**	25	.984	32	1.26	17	.669	55	2.169	70	2.756	NG2L	0,34	.75
3955491	**KM40TSS25ENER3**	25	.984	34	1.34	17	.669	55	2.169	70	2.756	NG3L	0,35	.77
3955489	**KM40TSS25HNER2**	25	.984	32	1.26	17	.669	75	2.954	100	3.937	NG2L	0,49	1.08
3955493	**KM40TSS25HNER3**	25	.984	34	1.34	17	.669	75	2.954	100	3.937	NG3L	0,49	1.09
3955497	**KM40TSS32GNER3**	32	1.260	40	1.57	22	.866	76	2.993	90	3.543	NG3L	0,55	1.21
3955495	**KM40TSS32JNER3**	32	1.260	40	1.57	22	.866	96	3.780	110	4.331	NG3L	0,67	1.48
left hand														
3955480	**KM40TSS12ENEL2**	12	.472	19	.73	11	.433	42	1.655	70	2.756	NG2R	0,27	.59
3955482	**KM40TSS16FNEL2**	16	.630	20	.79	11	.433	56	2.209	80	3.150	NG2R	0,28	.62
3955484	**KM40TSS20GNEL2**	20	.787	25	.98	13	.512	70	2.757	90	3.543	NG2R	0,35	.76
3955486	**KM40TSS25ENEL2**	25	.984	32	1.26	17	.669	55	2.169	70	2.756	NG2R	0,34	.75
3955490	**KM40TSS25ENEL3**	25	.984	34	1.34	17	.669	55	2.169	70	2.756	NG3R	0,35	.77
3955488	**KM40TSS25HNEL2**	25	.984	32	1.26	17	.669	75	2.954	100	3.937	NG2R	0,49	1.08
3955492	**KM40TSS25HNEL3**	25	.984	34	1.34	17	.669	75	2.954	100	3.937	NG3R	0,49	1.09
3955496	**KM40TSS32GNEL3**	32	1.260	40	1.57	22	.866	76	2.993	90	3.543	NG3R	0,55	1.21
3955494	**KM40TSS32JNEL3**	32	1.260	40	1.57	22	.866	96	3.780	110	4.331	NG3R	0,67	1.48

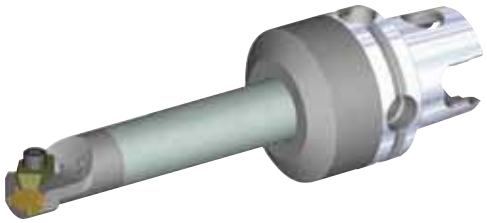
(continued)

(NE 90° • Steel — continued)

Spare Parts

catalog number	clamp	clamp screw
right hand		
KM40TSS12ENER2	CM147	MS1488
KM40TSS16FNER2	CM147	MS1488
KM40TSS20GNER2	CM75	MS1488
KM40TSS25ENER2	CM75	MS1488
KM40TSS25ENER3	CM73	MS1489
KM40TSS25HNER2	CM75	MS1488
KM40TSS25HNER3	CM73	MS1489
KM40TSS32GNER3	CM73	MS1489
KM40TSS32JNER3	CM73	MS1489
left hand		
KM40TSS12ENEL2	CM146	MS1488
KM40TSS16FNEL2	CM146	MS1488
KM40TSS20GNEL2	CM74	MS1488
KM40TSS25ENEL2	CM74	MS1488
KM40TSS25ENEL3	CM-72	MS1489
KM40TSS25HNEL2	CM74	MS1488
KM40TSS25HNEL3	CM-72	MS1489
KM40TSS32GNEL3	CM-72	MS1489
KM40TSS32JNEL3	CM-72	MS1489





KM QUICK CHANGE

NE 90° • Carbide

order number	catalog number	D2 mm	D2 in	D min mm	D min in	F mm	F in	L4 mm	L4 in	L1 mm	L1 in	gage insert	kg	lbs
right hand														
3951836	**KM40TSE16JNER2**	16	.630	20	.79	11	.433	80	3.15	110	4.331	NG2L	0,41	.90
left hand														
3951835	**KM40TSE16JNEL2**	16	.630	20	.79	11	.433	80	3.15	110	4.331	NG2R	0,41	.90

Spare Parts

catalog number	clamp	clamp screw
right hand		
KM40TSE16JNER2	**CM146**	**MS1488**
left hand		
KM40TSE16JNEL2	**CM147**	**MS1488**

The WIDIA™ high-performance carbide grades, coupled with our rigid TopThread clamping design, offer the metalworking industry optimum threading productivity.

When the large inventory of WIDIA standard products does not completely satisfy your productivity requirements, consider having TopThread inserts custom ground to meet your unique application needs.

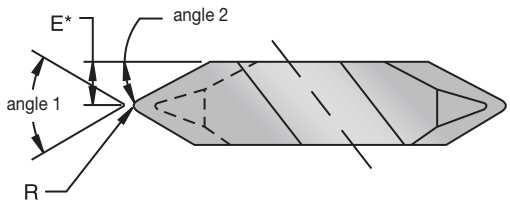
The large variety of TopThread blank sizes allows maximum flexibility in threading endform design, especially for extra wide or oil field applications.

Common examples of special forms are shown here. Please contact your local WIDIA representative for recommendations on satisfying your special threading needs.

Features and Benefits:

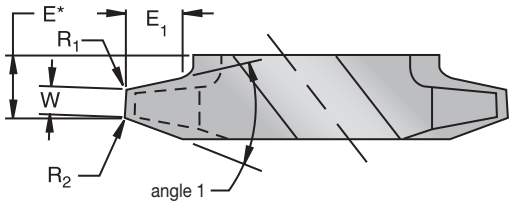
- Quotes are handled quickly and efficiently using state-of-the-art CAD design software and electronic database software.
- Our Carbide Custom Solutions Design Team is your link to one of the industry's largest electronic databases. They can solve your most challenging design problems.
- Where necessary or required, concept drawings are available to facilitate your engineering development.
- A large number of high-performance carbide grades are available to optimize your productivity. The option of producing standard insert styles in non-standard carbide grades allows you to optimize tool life performance.

style C2 RH shown



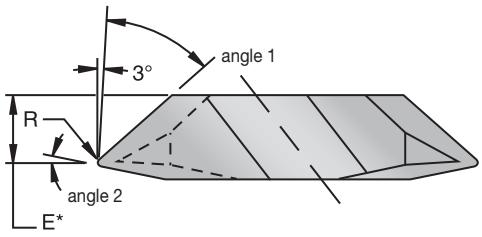
*to theoretical sharp point

style C3 RH shown



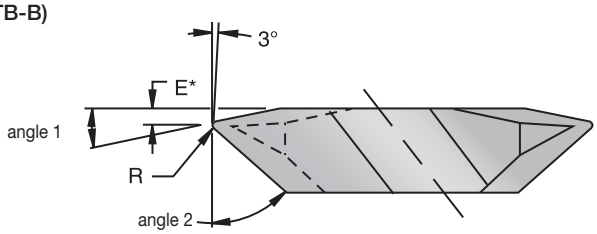
*to theoretical sharp point

style C4 (NTB-A) RH shown



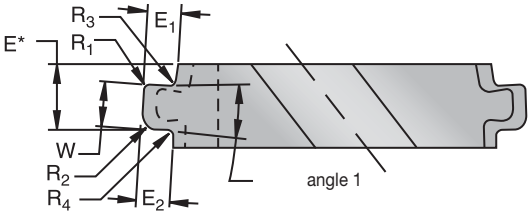
*to theoretical sharp point

style C5 (NTB-B) RH shown



*to theoretical sharp point

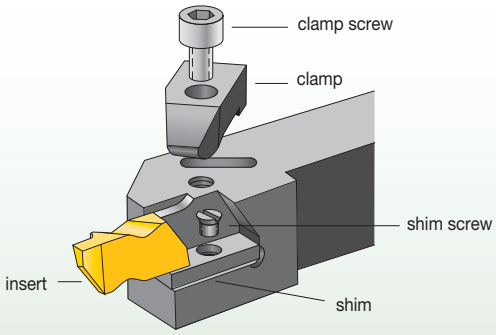
style C6 RH shown



*to theoretical sharp point

NOTE: Right-hand inserts shown; left-hand inserts are also available.

TopThread and TopGroove Toolholders and Boring Bars



insert size and style	clamp	clamp screw	shim	shim screw
NG-1L	CM-109	S-304	–	–
NG-2R	CM-182	S-310	–	–
NG-2L	CM-183	S-310	–	–
NG-2R	CM-74	S-310	–	–
NG-2L	CM-75	S-310	–	–
NG-3R	CM-184	S-412	–	–
NG-3L	CM-185	S-412	–	–
NG-3R	CM-72	S-412	–	–
NG-3L	CM-73	S-412	–	–
NG-3R*	CM-78	S-412	–	–
NG-3L*	CM-70	S-412	–	–
NG-4R	CM-72	S-412	SM-420	SL-344
NG-4L	CM-73	S-412	SM-420	SL-344
NG-5R	CM-80	S-352	–	–
NG-5L	CM-81	S-352	–	–
NG-6R	CM-120	S-412	SM-416	S-111
NG-6L	CM-121	S-412	SM-416	S-111
NG-8R	CM-144	S-422	SM-419	S-112
NG-8L	CM-145	S-422	SM-419	S-112
NG-8R**	CM-144	S-422	SM-427	S-111
NG-8L**	CM-145	S-422	SM-427	S-111
TopGroove relief grooving				
NU-3125R	CM-72	S-412	–	–
NU-3125L	CM-73	S-412	–	–
NU-3125R**	CM-72	S-618	–	–
NU-3125L**	CM-73	S-618	–	–

**25mm diameter boring head.*
***Boring head.*